

Practice Entrance Exam MPC 093

This is a practice exam. Questions on this practice exam may be different and include topics not found on the actual exam and vice-versa. You must receive a score of 65% or better (that's 6 questions) in order to enroll in MPC 093. You may not retake this entrance exam. You should be prepared for it when you take it.

The results of the final will be available the morning after you take this exam. Be sure your instructor knows when you plan to take the exam.

Practice Exam Answer Key:

Problem	Answer
1	D
2	C
3	A
4	C
5	D
6	B
7	D
8	A
9	D

1. Solve: $1 < \frac{9-5x}{2} \leq 7$

a) $-\frac{14}{5} < x \leq \frac{7}{5}$

b) $\frac{7}{5} \leq x < -1$

c) $\frac{2}{5} < x \leq \frac{8}{5}$

d) $-1 \leq x < \frac{7}{5}$

e) None of the above

2. Solve and graph: $-0.5 \leq 3 + 7x < 13.5$



e) None of the above

3. Solve: $2x + 4 < 13 - x$ or $4x \leq 6x - 14$

a) $(-\infty, 3) \cup [7, \infty)$

b) $(3, 7]$

c) $(-\infty, 7]$

d) $(-\infty, 7) \cap [3, \infty)$

e) None of the above

4. Solve for x: $|4 - 3x| \geq 8$

- a) $-\frac{4}{3} \leq x \leq 4$
- b) $x \leq -4$ or $x \geq \frac{4}{3}$
- c) $x \leq -\frac{4}{3}$ or $x \geq 4$
- d) $x \leq -\frac{4}{3}$ and $x \geq 4$
- e) None of the above

5. Solve for x only: $y = 3 - \frac{5}{7}x$
 $5x + 7y = 2$

- a) $x = -\frac{5}{3}$
- b) $x = -\frac{133}{30}$
- c) Dependent system, there are infinitely many solutions
- d) Inconsistent system, there are no solutions
- e) None of the above

6. Solve the system: $3x - 2y = -10$
 $6x + 5y = 25$

- a) (4, 1)
- b) (0, 5)
- c) Inconsistent system, there are no solutions
- d) Dependent system, there are infinitely many solutions
- e) None of the above

7. How many ounces each of an 8% alcohol solution and a 15% alcohol solution must be mixed to form 100 ounces at a 12.2% alcohol solution?

- a) 50 oz of each
- b) 47 oz of 8% solution and 53 oz of 15% solution
- c) 80 oz of 8% solution and 20 oz of 15% solution
- d) 40 oz of 8% solution and 60 oz of 15% solution
- e) None of the above

8. Simplify: $\frac{\frac{a}{b} \cdot \frac{b}{a}}{\frac{1}{b^2} \cdot \frac{1}{a^2}}$

- a) ab
- b) $\frac{ab}{a^2 - b^2}$
- c) $\frac{a^2 + ab + b^2}{a + b}$
- d) $\frac{a^2 + b^2}{a^2 - b^2}$
- e) None of the above

9. Solve for y : $\frac{y}{y-5} - \frac{2}{y+3} = \frac{16}{y^2 - 2y - 15}$

- a) No Solution
- b) $y = -3$
- c) $y = 2, y = -3$
- d) $y = 2$
- e) None of the above